SERVICE ADJUSTMENTS WHICH MUST BE MADE WITH RC HAND UNIT

SERVICE MODE

Before making adjustments with RC hand unit, make sure the supply voltage is correctly adjusted (see service adjustments on power supply/horizontal deflection unit).

Number buttons of the hand unit are used for service adjustments when the set is in the service mode. Analog controls function normally; teletext controls and other special controls don't function.
TV receiver is set to the service mode by pressing quickly one norm button N1, N2 or N3 (or P/C button on the hand unit) and within 8 seconds the service switch located in the local control unit (see figure). In the service mode the display shows one indicator led illuminating and other segments are off. You can get back to normal TV mode by pressing the service switch again. It is possible to get to the service mode only from TV mode.
Remote control commands in the service mode are as follows:
- With number buttons you can give a two numbered code which determines the adjustment (e.g. 27=picture height).
- The adjustment is then made by pressing STEP+ and STEP- buttons.
- The adjusted value is stored to the NVM by pressing -/-- button. You must store each function separately. The value of the adjustment range is 00...31 for vertical and horizontal compensation and 00...63 for other adjustments.
- The version number of the NVM can be asked by pressing P/C button. It is shown in hexadecimal form (e.g. "02" = 2k memory, "01" = 1k memory).

CONFIGURATION AND FAULT DIAGNOSIS FOR CIRCUITS CONNECTED TO THE IIC-BUS

By pressing 04 in the service mode, the processor checks all possible addresses of bus driven circuits and shows the address of the circuit if found for about one second. After checking all the circuits, the display shows 04 again.
The set must be configurated after adding or removing some options eg:
- adding or changing the teletext module
- adding the inner satellite unit
- changing the scart unit (copy function)

The configuration of the set is stored in the NVM by pressing -/-- button. The set takes the new configuration in use only after reseting the set with the mains switch. The configuration serves also as a fault diagnosis system.

In table 1 is shown the remarks for the adjustments.
In table 2 is shown two numbered codes for adjustments. If you choose the code which is not defined, the display will show the previous code again.
If all adjustments must be made, follow the order in table 2.
NB! Horizontal linearity is adjusted with Lz5.
In table 3 is shown the display codes during configuration in the sequence the microprocessor checks them.
NB!There is an adjustment for vertical and horizontal shift (codes 30 and 38) both in 50Hz and 60Hz systems. While adjusting you must have the right transmission.

TABLE 1

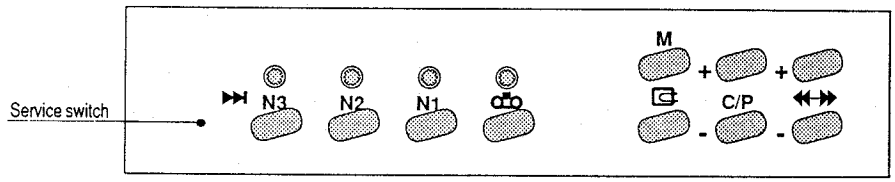
Adjustment	Code	Remarks
R and G gain	22 and 23	Adjust white area of test picture to white.
Line frequency	25	Connect test point 39 to the ground before adjustment.
Picture height and vert. comp.	27 and 31	Set brightness and contrast to 20% and adjust the picture height (code 27). Press memory button (-/--). Set brightness and contrast to 90 % and compensate the change in picture height (code 31). Press memory button (-/--).
Picture width and hor. comp.	32 and 36	Set brightness and contrast to 20% and adjust the picture width (code 32). Press memory button (-/--). Set brightness and contrast to 90% and compensate the change in picture width (code 36). Press memory button (-/--).

TABLE 2

Adjustment	Code
Line frequency	25
Vertical shift/50Hz	30
Vertical shift/60Hz	38
Picture height	27
Vertical compensation	31
Vertical linearity	28
Hor. phase shift	26
Picture width	32
Hor. compensation	36
Trapez correction	35
S-correction	29
E-W corner correction	34
E-W raster correction	33
R gain	22
G gain	23

TABLE 3

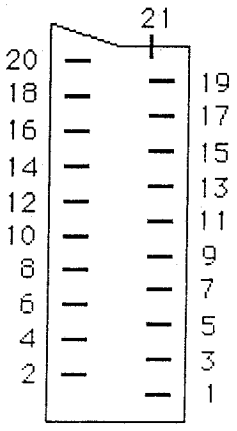
06	Satellite processor
04	Teletext processor (high feature)
22	CCT basic teletext (ICt2)
d2	RGB-switch (ICe1)
94	Extra videoswitch (only in monitor)
92	Copy switch (ICl2)
90	Scart switch (ICl1)
80	Sound adjustment circuit (ICd1)
84	Stereo identification circuit (ICd2)
48	Driver of the decoder (ICe2)
8C	Sync processor (ICh2)
C2	PLL (ICi1)
A2	NVM of teletext (ICt5)
A0	NVM of TV (ICf1)
Pn	Picture memory n kilobyte
An	Antiope text



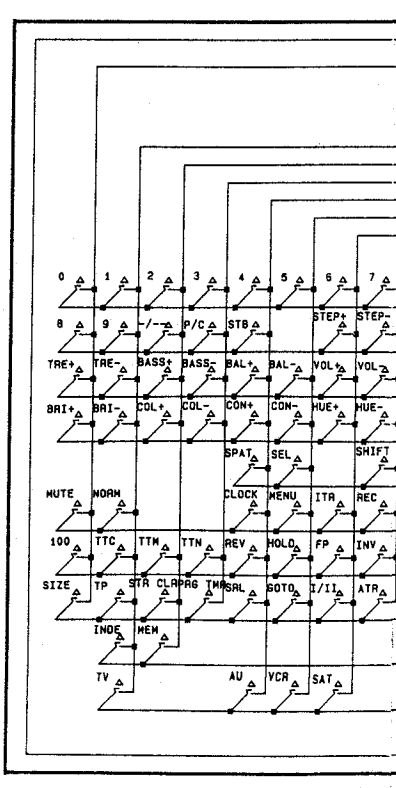
SCART EUROCONNECTOR

Contact number	Signal	Matching value
1	Audio output	0,5V/1kohm
2	Audio input	0,5V/10kohm
3	Audio ouput	0,5V/1kohm
4	Audio ground	-
5	Blue ground	-
6	Audio input	0,5V/10kohm
7	Blue input	0,7V/75ohm, positive going signal
8	Function switching (TV/VCR) input	Logical zero: 0V to +0,4V Logical one: +9,5V to +12V
	RC-5 output	Open collector
9	Green ground	-
10	No connection permitted	-
11	Green input	0.7V/75ohm, positive going signal
12	No connection permitted	-
13	Red ground	-
14	RC-signal input	Min 6Vpp, max 12Vpp
15	Red input	0.7V/75ohm, positive going signal
16	Fast blanking input	Logical zero: 0V to +0,4V Logical one: +1V to +3V
17	Video ground	-
18	Fast blanking ground	-
19	Video output	1V/75ohm, positive going video
20	Video input Synchronization input	175ohm, positive going video 0,3Vpp/75ohm
21	Plug shield	Connected to chassis

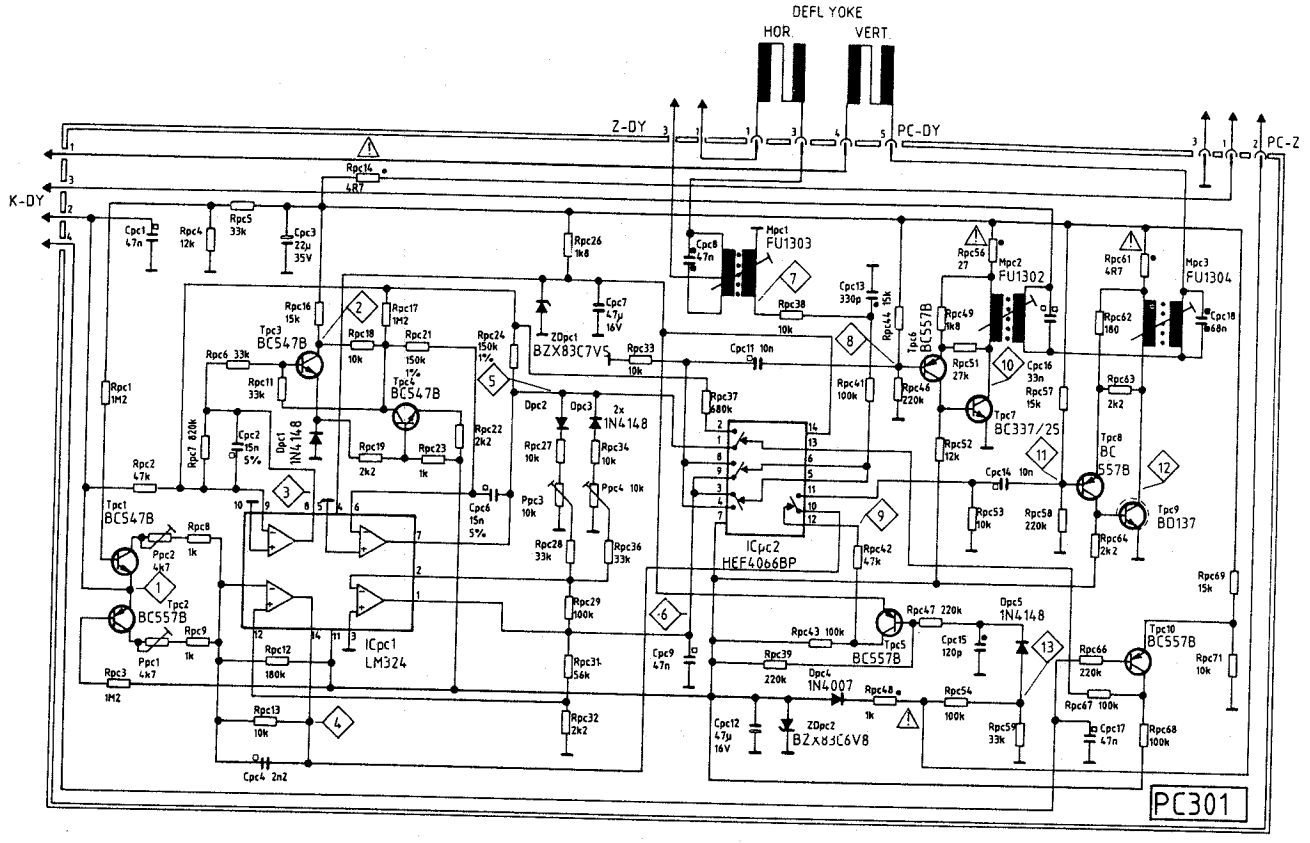
Euroconnector

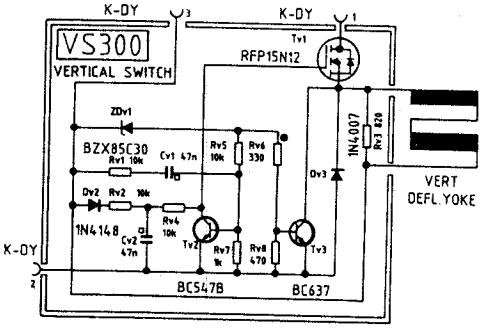


REMOTE CONTROL TRA


0 1 2 3 4 5 6 7
8 9 -/-- P/C STB STEP+ STEP-
TRE+ TRE- BASS+ BASS- BAL+ BAL- VOL+ VOL-
BRI+ BRI- COL+ COL- CON+ CON- HUE+ HUE-
SPAT SEL SHIFT
MUTE NORM CLOCK MENU ITA REC
100 TTC TTM TTN REV HOLD FP INV
SIZE TP STR CLR PRG TMR SRL GOTO I/II ATR
INDE MEM
TV AU VCR SAT

RASTER CORRECTION MODULE PC301





RASTER CORRECTION MODULE PC301

SERVICE ADJUSTMENTS

The adjustments have to be made in the following order. Use cross hatch pattern.

PC1. Dynamic S-correction
Connect the oscilloscope to test point 7, and adjust the curve according to figure 1, with Mpc1.

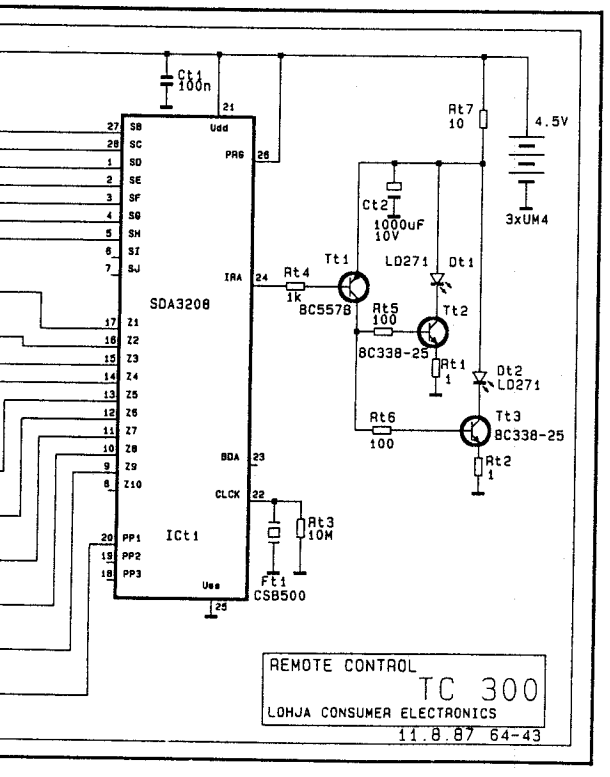
PC2. North-South phase correction
Turn Ppc1 fully clockwise viewed through the print side. Adjust Mpc3 until the bow of the pattern is horizontally in the middle of the screen.

PC3. North-South amplitude correction
Adjust the horizontal lines as straight as possible with Ppc1 and Ppc2.

PC4. Guilwing phase correction
Turn Ppc3 and Ppc4 to the middle position. Connect the oscilloscope to test points 7 and 10, and adjust the curves according to the figure 2, with Mpc2.

PC5. Guilwing amplitude correction
Adjust the horizontal lines as straight as possible with Ppc3 and Ppc4.

ITTER TC300



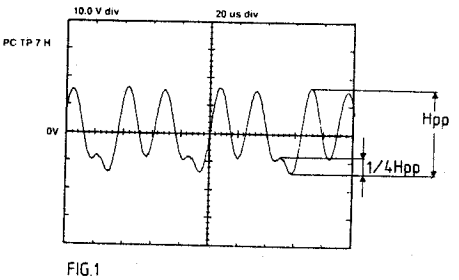


FIG.1

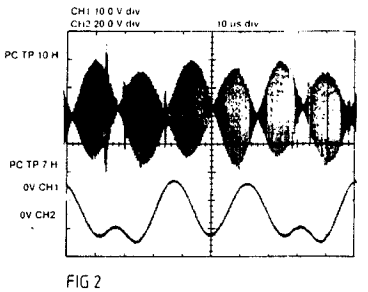


FIG 2

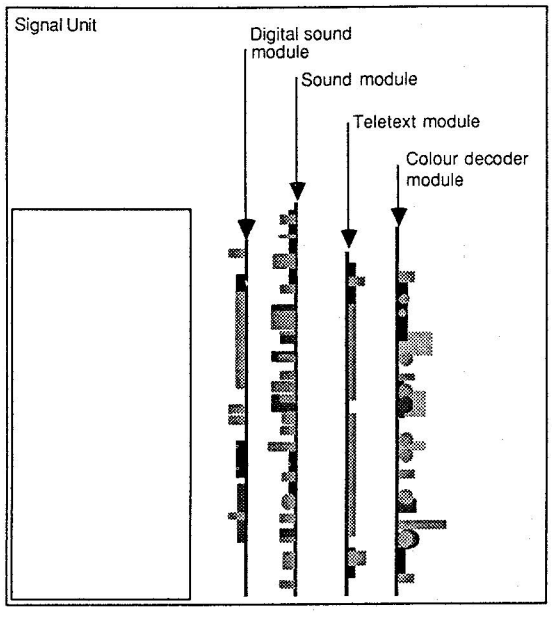
GB

MOUNTING INSTRUCTIONS OF THE TELETEXT MODULE

1. Mount the Teletext module into the teletext connectors of the Signal Unit (see fig.).

2. Switch the receiver on and set it to the service mode.

3. Start the configuration by pressing 04, store it in the NVM by pressing -/-- button and reset the set with the mains switch.



SDA 2060

CAAD	= Clock activated analog display
NPCLR	= No page clear in step function
FULLF	= Full field teletext reception is possible
APS1, APS0	= Advertising page select

APS1	APS0	
0	0	None
0	1	Quelle
1	0	Finlux
1	1	Asa

IPLB0, IPLB1, IPLB2 = Info page language bits

IPLB2	IPLB1	IPLB0	
0	0	0	Automatic selection through transmitted language bits
0	0	1	Italian info page
0	1	1	German info page
1	1	0	French info page
1	1	1	English info page

SAA 5231

STTV	= Sync output to TV
Osc out	= Oscillator output (6 MHz)
Osc in	= Oscillator input (6 MHz)
VID IN	= Composite video input
TTD	= Teletext data output
TTC	= Teletext clock output
F6	= 6 MHz clock output
VCS	= Video composite sync output
SAND	= Sandcastle input
$\overline{TCS}$	= Sync input

SAA 5241

$\overline{COR}$	= Contrast reduction
TTD	= Teletext data input
TTC	= Teletext clock input
F6	= 6 MHz clock input
VCS	= Video composite sync input
SAND	= Sandcastle output
$\overline{TCS/SCS}$	= Text composite sync/scan composite sync output
HOK	= Hamming O.K.
D0 - D7	= 8 RAM data lines
$\overline{OE}$	= Output enable
VCC	= Power supply
SCL	= Serial clock input
SDA	= Serial data
Y	= Character foreground
R	= Red output
B	= Blue output
G	= Green output
FB	= Blanking output
A10 - A12	= Chapter address output
A0 - A9	= RAM address output
$\overline{WE}$	= Write enable output

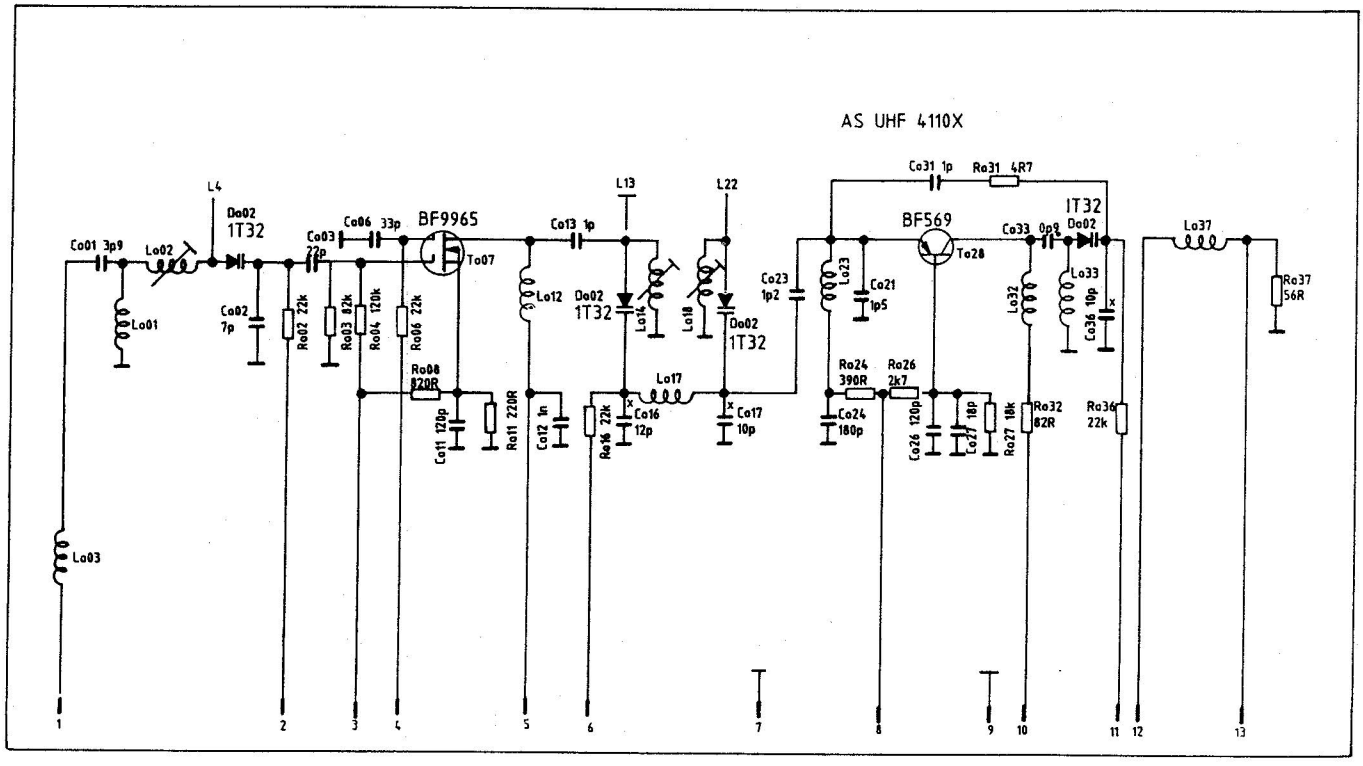
SAA 5231

STTV	= Sync output to TV
Osc out	= Oscillator output (6 MHz)
Osc in	= Oscillator input (6 MHz)
VID IN	= Composite video input
TTD	= Teletext data output
TTC	= Teletext clock output
F6	= 6 MHz clock output
VCS	= Video composite sync output
SAND	= Sandcastle input
$\overline{TCS}$	= Sync input

SAA 5240

$\overline{COR}$	= Contrast reduction
TTD	= Teletext data input
TTC	= Teletext clock input
F6	= 6 MHz clock input
VCS	= Video composite sync input
SAND	= Sandcastle output
$\overline{TCS/SCS}$	= Text composite sync/scan composite sync output
HOK	= Hamming O.K.
D0 - D7	= 8 RAM data lines
$\overline{OE}$	= Output enable
VCC	= Power supply
SCL	= Serial clock input
SDA	= Serial data
Y	= Character foreground
R	= Red output
B	= Blue output
G	= Green output
FB	= Blanking output
A10 - A12	= Chapter address output
A0 - A9	= RAM address output
$\overline{WE}$	= Write enable output

UHF SUBMODULE 4110



= Clock activated analog display
= No page clear in step function
= Full field teletext reception is possible
= Advertising page select

APS1	APS0	
0	0	None
0	1	Quelle
1	0	Finlux
1	1	Asa

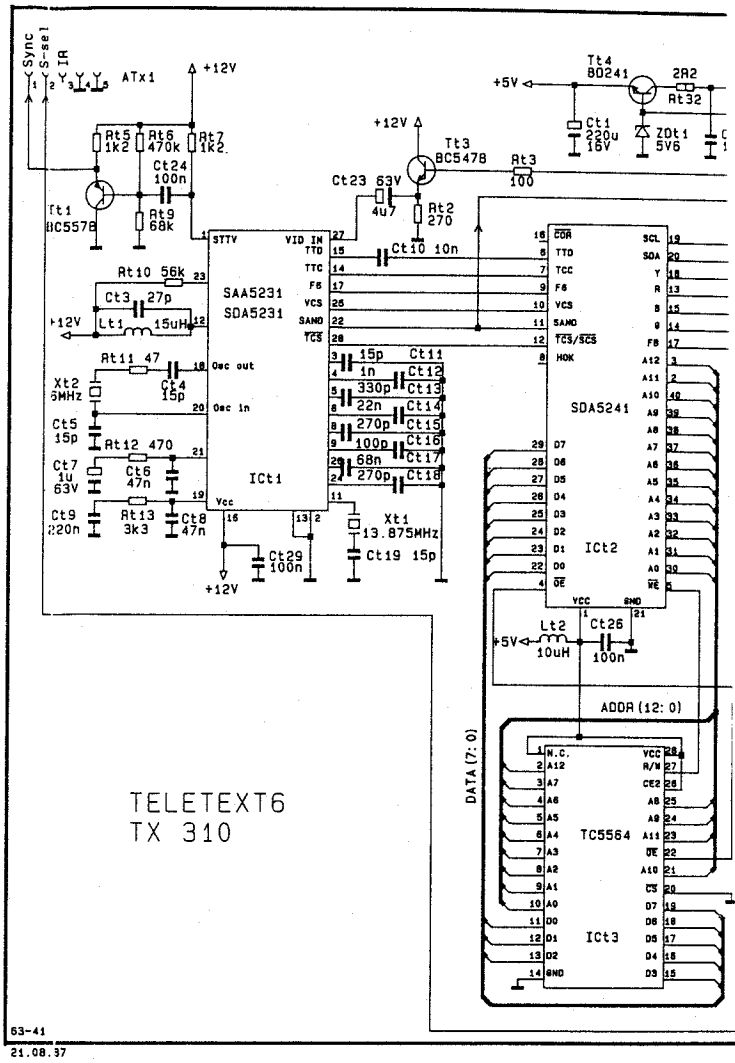
= Info page language bits

IPLB2	IPLB1	IPLB0	
0	0	0	Automatic selection through transmitted language bits
0	0	1	Italian info page
0	1	1	German info page
1	1	0	French info page
1	1	1	English info page

= Sync output to TV
= Oscillator output (6 MHz)
= Oscillator input (6 MHz)
= Composite video input
= Teletext data output
= Teletext clock output
= 6 MHz clock output
= Video composite sync output
= Sandcastle input
= Sync input

SAA 5241

$\overline{COR}$	= Contrast reduction
TTD	= Teletext data input
TTC	= Teletext clock input
F6	= 6 MHz clock input
VCS	= Video composite sync input
SAND	= Sandcastle output
$\overline{TCS/SCS}$	= Text composite sync/scan composite sync output
HOK	= Hamming O.K.
D0 - D7	= 8 RAM data lines
$\overline{OE}$	= Output enable
VCC	= Power supply
SCL	= Serial clock input
SDA	= Serial data
Y	= Character foreground
R	= Red output
B	= Blue output
G	= Green output
FB	= Blanking output
A10 - A12	= Chapter address output
A0 - A9	= RAM address output
$\overline{WE}$	= Write enable output



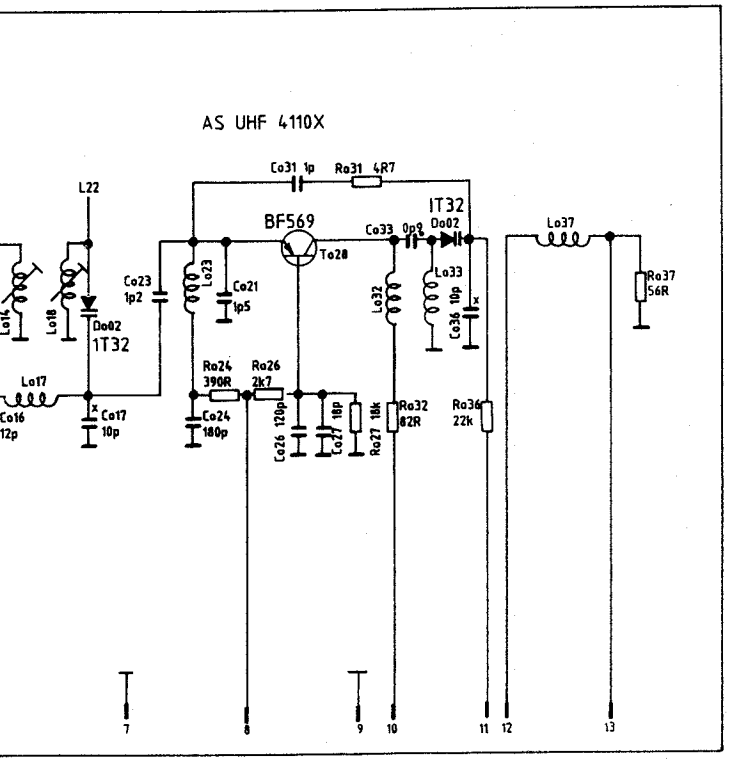
AA 5231

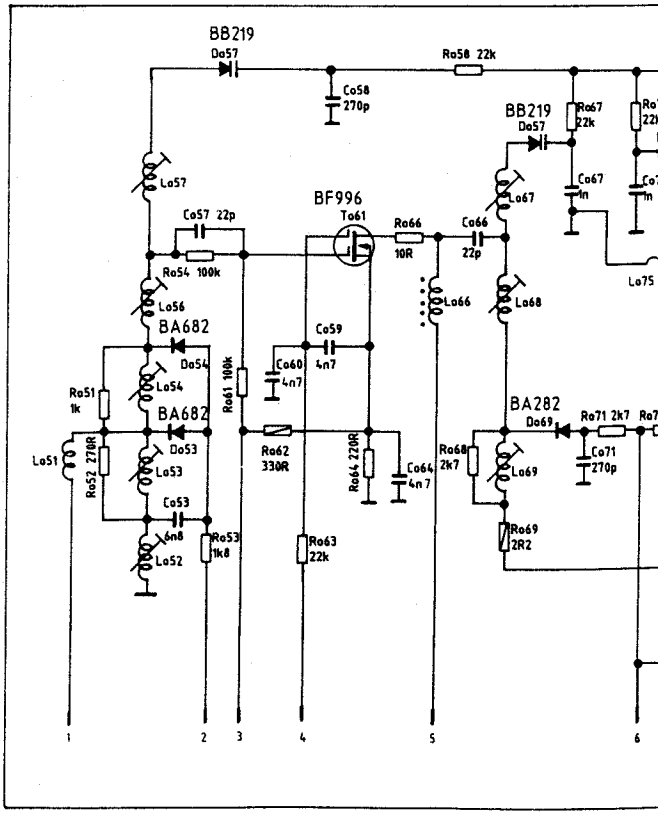
= Sync output to TV
= Oscillator output (6 MHz)
= Oscillator input (6 MHz)
= Composite video input
= Teletext data output
= Teletext clock output
= 6 MHz clock output
= Video composite sync output
= Sandcastle input
= Sync input

SAA 5240

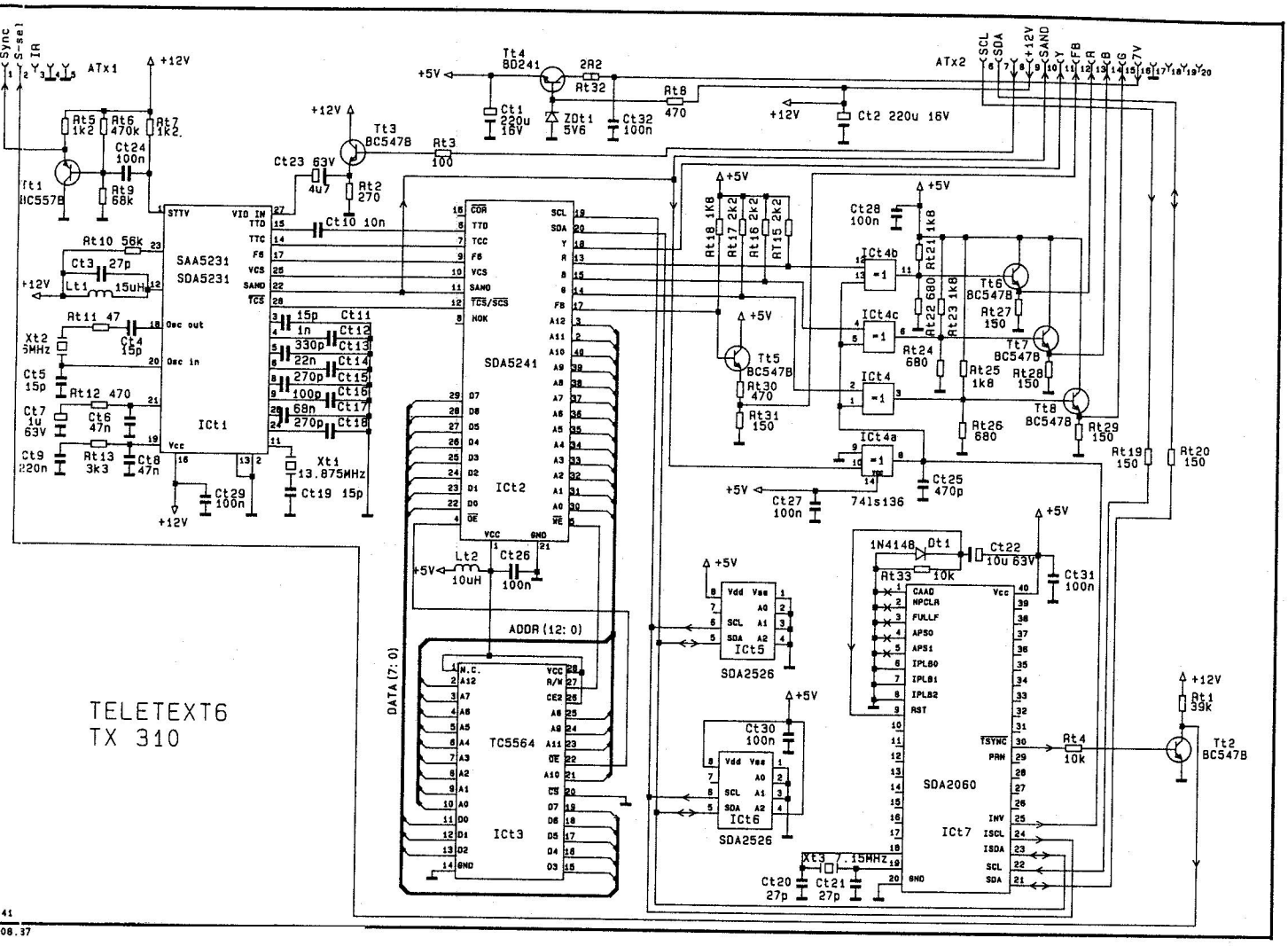
$\overline{COR}$	= Contrast reduction
TTD	= Teletext data input
TTC	= Teletext clock input
F6	= 6 MHz clock input
VCS	= Video composite sync input
SAND	= Sandcastle output
$\overline{TCS/SCS}$	= Text composite sync/scan composite sync output
HOK	= Hamming O.K.
D0 - D7	= 8 RAM data lines
$\overline{OE}$	= Output enable
VCC	= Power supply
SCL	= Serial clock input
SDA	= Serial data
Y	= Character foreground
R	= Red output
B	= Blue output
G	= Green output
FB	= Blanking output
A10 - A12	= Chapter address output
A0 - A9	= RAM address output
$\overline{WE}$	= Write enable output

UHF SUBMODULE 4110

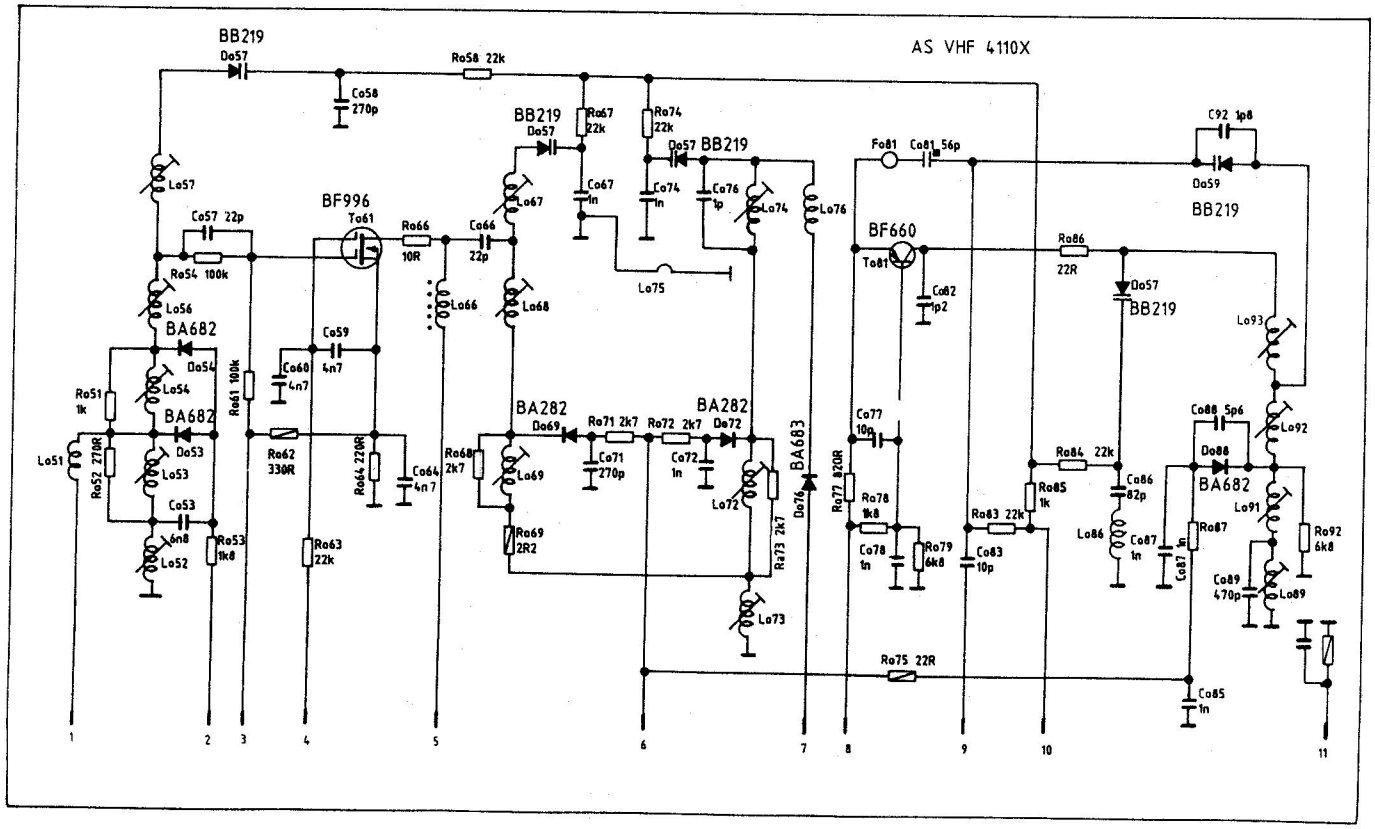


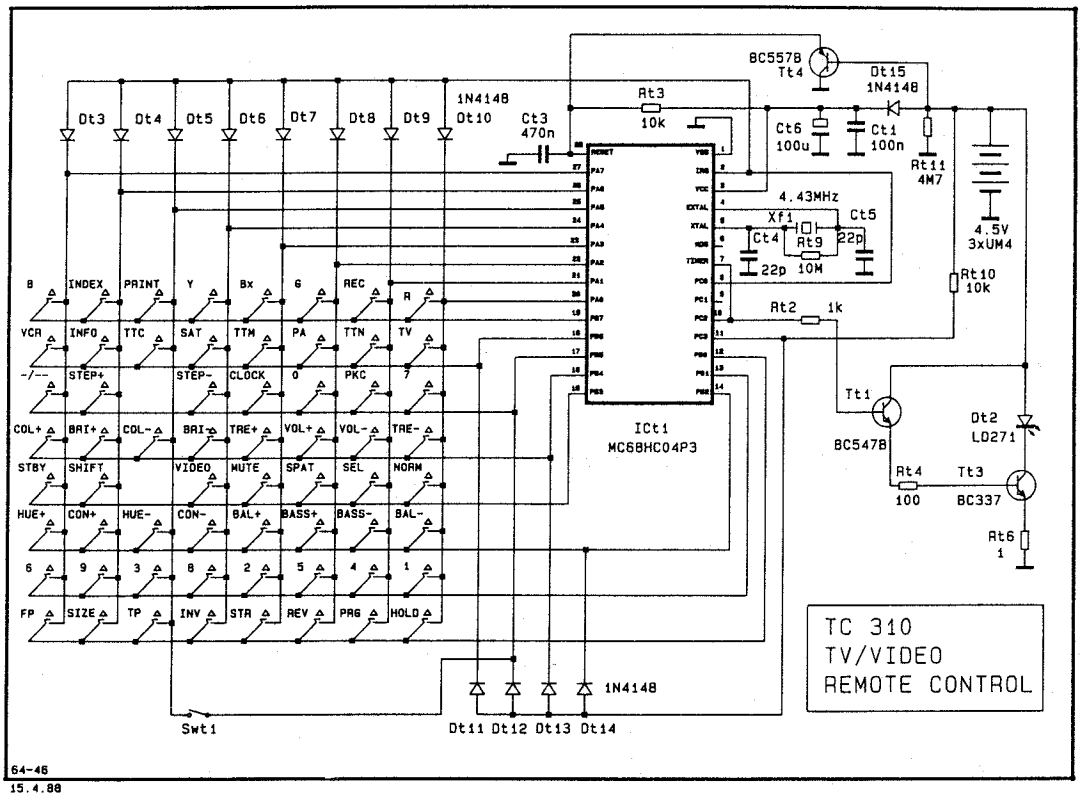


TELETEXT MODULE TX310



VHF SUBMODULE 4110





	RN100	RN101
Cr11	56p	56p + 100p
Fr01	TH316BQM-2080QDAF	TH316BQM-2110QDAF
Xr01	5,85 MHz	6,552 MHz

PERMANENT PROGRAMMING OF RC3010

Remote control hand unit RC3010 can be programmed for different VCRs by using programming switch and number buttons as described in instruction manual. The basic setting mode of the remote control functions is mode 0 (FINLUX VR 2008) or 8 (ASA VR 2017). You can change the basic setting permanently by mounting the diodes Dt11...Dt14 (1N 4148) according to the table 1. When changing the batteries or when remote control unit lacks the operating voltage for some other reason, the basic setting mode is always taken in use after reconnecting the operating voltage.
From table 2 you can find which VCR models function in which mode.

	Dt11	Dt12	Dt13	Dt14
Mode 0	-	-	-	-
Mode 1	-	-	-	x
Mode 2	-	-	x	-
Mode 3	-	-	x	x
Mode 4	-	x	-	-
Mode 5	-	x	-	x
Mode 6	-	x	x	-
Mode 7	-	x	x	x
Mode 8	x	-	-	-

Table 1

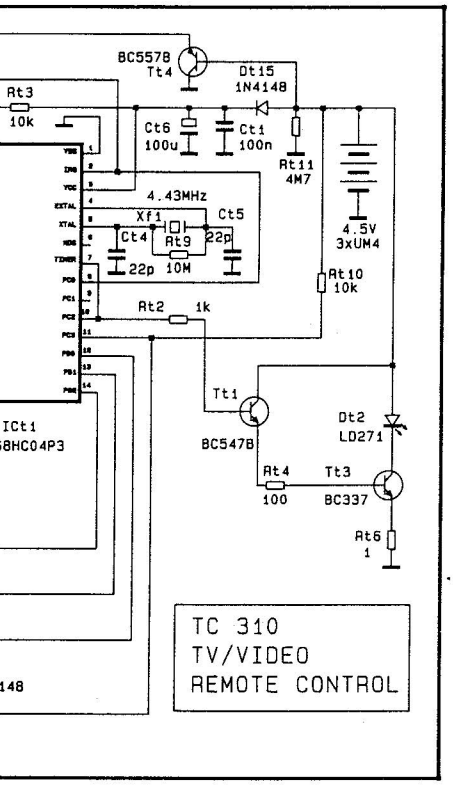
Mode 0	FINLUX VR 2008, SCHNEIDER 266
Mode 1	FINLUX VR 1010, 1012, 1030, 2010, 2030, 2040 ASA VR 6000, VR2019 PHILIPS VR 6443, 6543, 6862, 6462, 6660, 6467, 6760
Mode 2	SHARP 781, 783, 785, 100, 102, 501, 801, 851
Mode 3	SHARP 682, 683, 684, 685, 693, 6F3
Mode 4	JVC HR-D 170, 180, 210, 230, 310, 470, 755, 530 EH, 120, 300
Mode 5	D.E.R.
Mode 6	HITACHI VT-250, VT-120, VT-130, VT-150 414E, 420
Mode 7	PANASONIC NV-G 12, 21, 25, NV-870 BLAUPUNKT RTV-320
Mode 8	ASA VR 2017

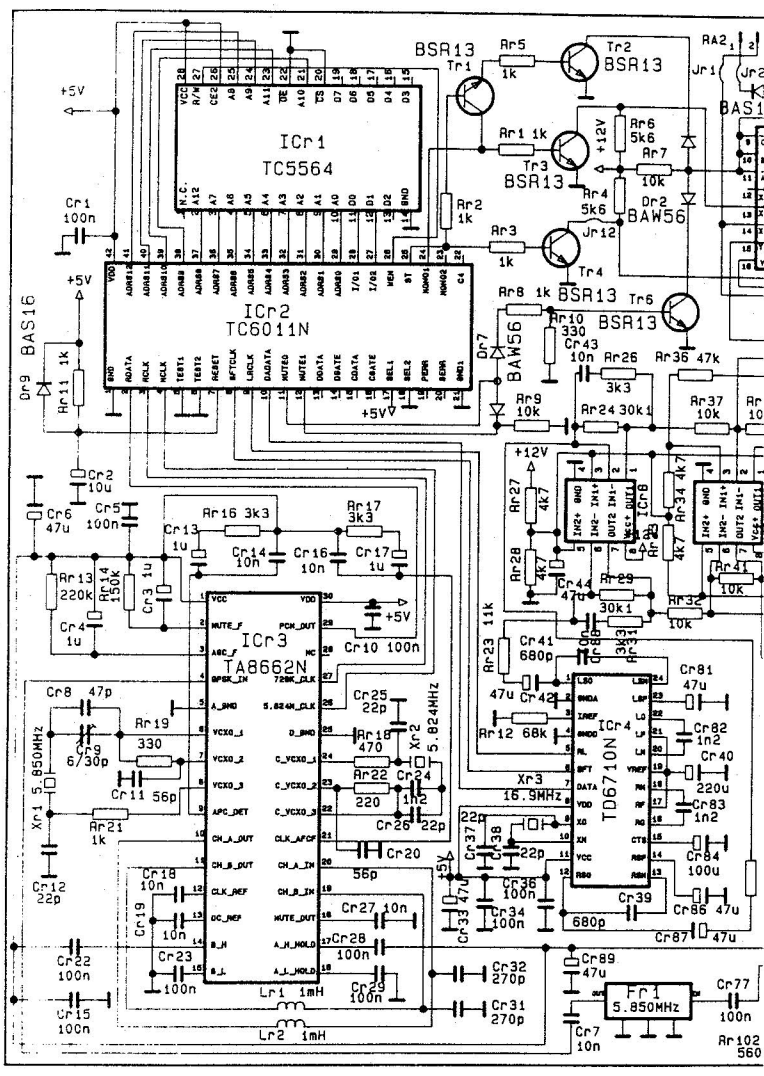
Table 2

2) Mounting of the Nicam

- o Check that resistors R are missing, fit 15 kohi
- o Bend the coil Lf3 (6,8 unit.
- o Bend also the signal u connector.

Order no. Art.nr Tilausnumero	NICAM modele NICAM modul NICAM moduli	Tv-chassis Tv-chassi Tv-kojeisto
03500606	RN200	1202, 1204, 1208, 1212, 1213, 1218, 1222, 12 1242, 1248, 1288, 2232, 2242, 2272, 2282
03500607	RN100	1308, 1312, 1313, 1318, 1322, 1332, 1342, 13 2332, 2333, 2336, 2342, 2343, 2346, 2372, 23 2386
03500608	RN201	1402, 1408, 1412, 1413, 1418, 1422, 1432, 24
03500609	RN101	1622, 1632, 1642, 2633, 2643, 2672, 2682





	RN100	RN101
Cr11	56p	56p + 100p
Fr01	TH316BQM-2080QDAF	TH316BQM-2110QDAF
Xr01	5,85 MHz	6,552 MHz

FINLUX VR 2008, SCHNEIDER 266
FINLUX VR 1010, 1012, 1030, 2010, 2030, 2040 ASA VR 6000, VR2019 PHILIPS VR 6443, 6543, 6862, 6462, 6660, 6467, 6760
SHARP 781, 783, 785, 100, 102, 501, 801, 851
SHARP 682, 683, 684, 685, 693, 6F3
JVC HR-D 170, 180, 210, 230, 310, 470, 755, 530 EH, 120, 300
D.E.R.
HITACHI VT-250, VT-120, VT-130, VT-150 414E, 420
PANASONIC NV-G 12, 21, 25, NV-870 BLAUPUNKT RTV-320
ASA VR 2017

Table 2

2) Mounting of the Nicam module

- o Check that resistors RI6 and RI7 have been composed in the receivers signal unit. If these resistors are missing, fit 15 kohm 0,25 W 5%:
- o Bend the coil Lf3 (6,8 µH) of the NICAM module so that it doesn't tuoch a coolingplate of the signal unit.
- o Bend also the signal units components that they won't touch the NICAM module when muonting it on connector.

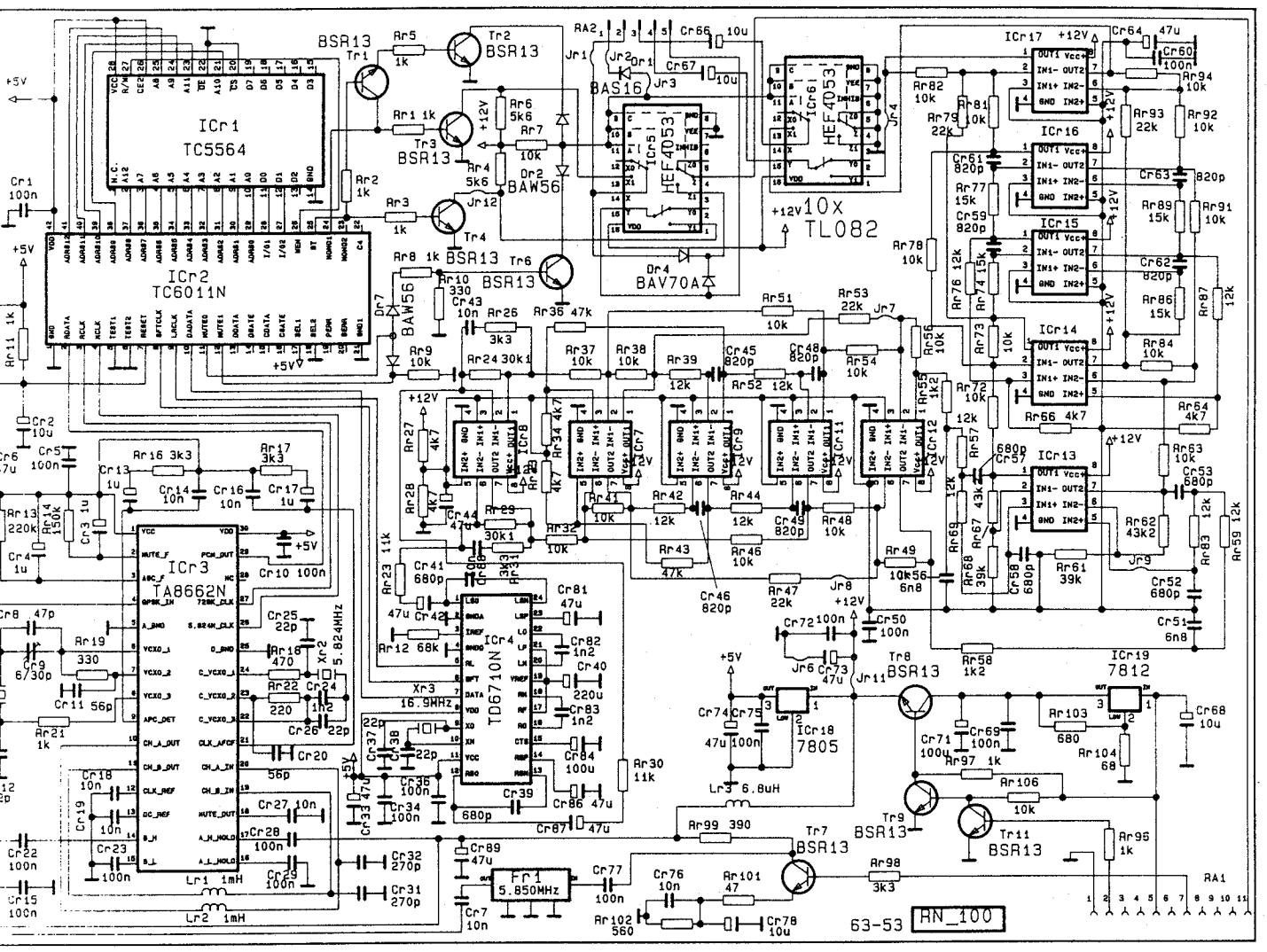
NICAM modele NICAM modul NICAM moduli	Tv-chassis Tv-chassi Tv-kojeisto
RN200	1202, 1204, 1208, 1212, 1213, 1218, 1222, 1232, 1238, 1242, 1248, 1288, 2232, 2242, 2272, 2282
RN100	1308, 1312, 1313, 1318, 1322, 1332, 1342, 1378, 1388, 2332, 2333, 2336, 2342, 2343, 2346, 2372, 2376, 2382, 2386
RN201	1402, 1408, 1412, 1413, 1418, 1422, 1432, 2472, 2482
RN101	1622, 1632, 1642, 2633, 2643, 2672, 2682

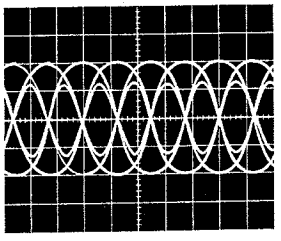
FITTING INSTRUCTIONS OF NICAM 728 MODULE FOR 1000/2000-SERIES RN201

"No-CTI-chassis", models 1402, 1408, 1412, 1413, 1418, 1422, 1432, 2472, 248

1. If there is an extra sound module fitted in the receiver, remove it. The NICAM-module will be fitted i same connector.
2. Fit the attached wire between Ra6 and pin 2 of 2ND SOUND connector, as shown in figure 1.
3. Fit the attached bundle of wires to components RI6 and RI7 on the component side and to componer and DI11 on the foil side, as shown in figure 1. R- and L-channel wires are fitted on the component s prevent radio disturbances.
4. Fit the NICAM module as follows: remove the connector frame, fit the NICAM module to the 2ND S connector and fit the attached connector frame to its place.
5. Connect the plug of the attached bundle of wires to the socket on the NICAM module. Route the 2-sound and St/mono wires under the signal unit, as shown in figure 1.

NICAM MODULE RN100 RN101



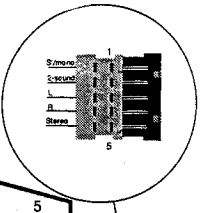


dule

d RI7 have been composed in the receivers signal unit. If these resistors
25 W 5%:

of the NICAM module so that it doesn't tuoch a coolingplate of the signal

components that they won't touch the NICAM module when muonting it on



FITTING INSTRUCTIONS OF NICAM 728 MODULE FOR 1000/2000-SERIES RN201

"No-CTI-chassis", models 1402, 1408, 1412, 1413, 1418, 1422, 1432, 2472, 2482

1. If there is an extra sound module fitted in the receiver, remove it. The NICAM-module will be fitted into the same connector.
2. Fit the attached wire between Ra6 and pin 2 of 2ND SOUND connector, as shown in figure 1.
3. Fit the attached bundle of wires to components RI6 and RI7 on the component side and to components DI6 and DI11 on the foil side, as shown in figure 1. R- and L-channel wires are fitted on the component side to prevent radio disturbances.
4. Fit the NICAM module as follows: remove the connector frame, fit the NICAM module to the 2ND SOUND connector and fit the attached connector frame to its place.
5. Connect the plug of the attached bundle of wires to the socket on the NICAM module. Route the stereo, 2-sound and St/mono wires under the signal unit, as shown in figure 1.

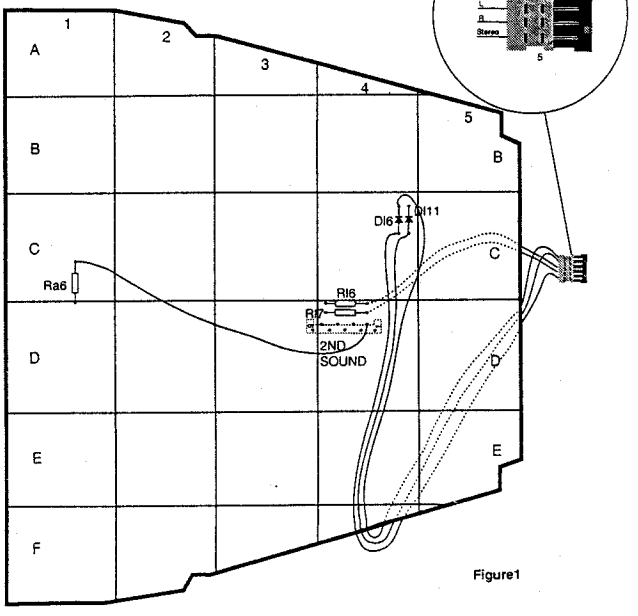
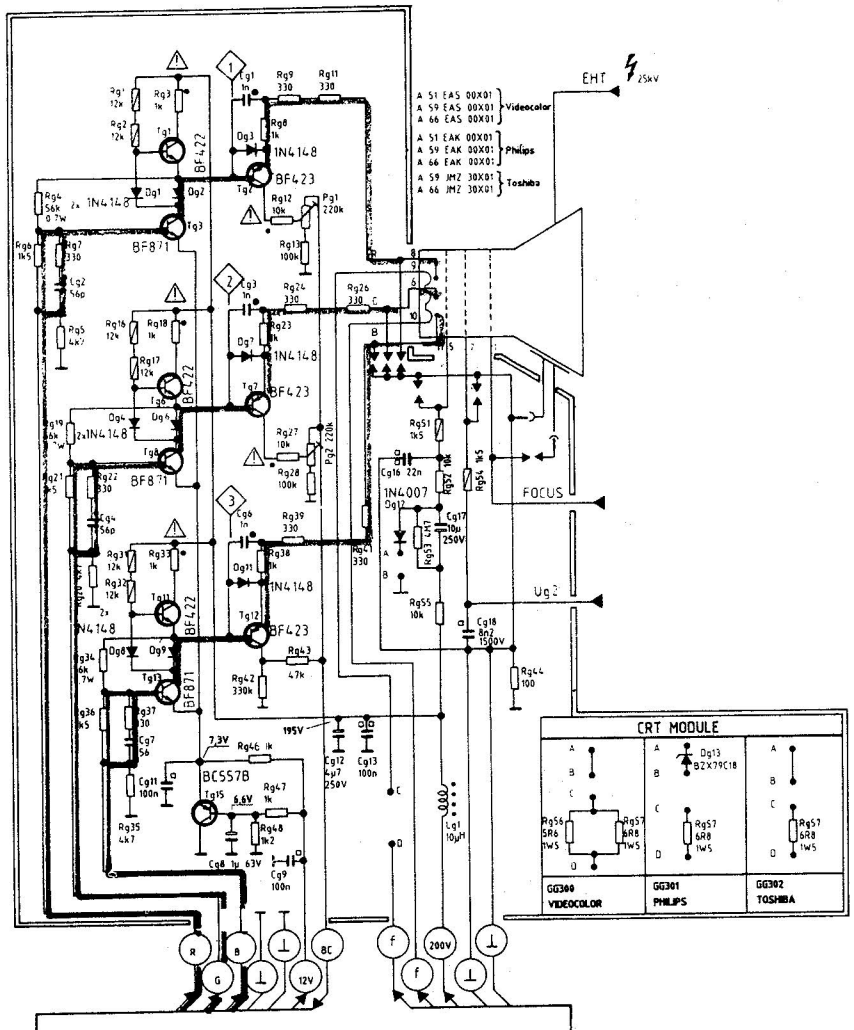


Figure1

CRT MODULE



D6

D7

D8

D8

D6

(B/B-Y) =BLUE OR B-Y COLOUR DIFFERENCE SIGNAL

(G/Y) =GREEN OR LUMINANCE SIGNAL

(R/R-Y) =RED OR R-Y COLOUR DIFFERENCE SIGNAL

(FB) =FAST BLANKING SIGNAL

(R OUT) =RIGHT AUDIO CHANNEL

(L OUT) =LEFT AUDIO CHANNEL

(SCL) =SERIAL CLOCK

(SDA) =SERIAL DATA

(R IN) =RIGHT AUDIO CHANNEL

(L IN) =LEFT AUDIO CHANNEL

(CVBS IN) =VIDEO SIGNAL

(CVBS OUT) =VIDEO SIGNAL

(RC) =REMOTE CONTROL

(STA1) =STATUS FROM SCART 1

(STA2) =STATUS FROM SCART 2

(L HP) =LEFT AUDIO CHANNEL FOR HEADPHONES

(R HP) =RIGHT AUDIO CHANNEL FOR HEADPHONES

(SAT COPY) =SATELLITE COPYING

(MODE 1) =MODE INFORMATION 1

(MODE 2) =MODE INFORMATION 2

(RGB INV) =RGB INVERTING

(HOLD) =PROCESSOR DISCONNECTING FROM I²C-BUS

(P-ON) =PICTURE ON DRIVING VOLTAGE 12 V

(S-ON) =SOUND ON DRIVING VOLTAGE 12 V

(BC) =BLACK CURRENT

(EW) =EAST-WEST RASTER CORRECTION

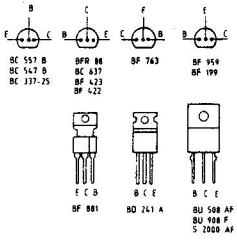
(BCL) =BEAM CURRENT LIMITING VOLTAGE

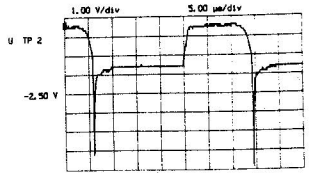
(7V TXT) =SUPPLY VOLTAGE FOR TELETEXT MODULE

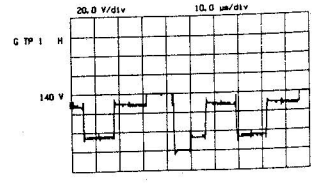
(H FLYB) =LINE FLYBACK

(H DRIVE) =DRIVE PULSES FOR LINE OUTPUT STAGE

(f) =FILAMENT VOLTAGE FOR CRT







Ceramic	Polystyren	Polyester Polycarbon	Polypropyl	Notes can be combined when necessary	
63 - 100V	63 - 100V	100V	100V	Paper capac	
				16V	1500V
160 - 250V	160 - 250V	250V	250V	Electrol 16V	1500V
					F
400 - 500V		400 V	400 V	Bipol capac	Foto capac
				T	
Hi - Cap				Tantal capac	Y capacitors

1/4W
1/2W
1W
2W
3W
7W
Low noise/Rauscharm Brusfritt/Pienikohinainen
Flame proof/Nicht brennb. Flammsäkert/Palamaton
Thermal fuse/Auslösesicherung Termisk säkring/Lämpövaroke
Fuse resistor/Sicherungswiderstand Säkringsmotstånd/Sulkuvastus

⚠ Critical safety component. Use identical component for replacement.

Amplifier	Gain controlled amplifier	Divider	Inverter	
Multiplier	Digital analog converter	Sandcastle pulse generator	Limiter	Demodulator
Voltage regulator	Oscillator	Switch		Sawtooth generator
Schmitt trigger		Phase detector		

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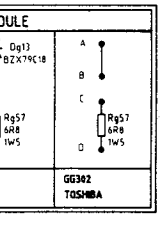
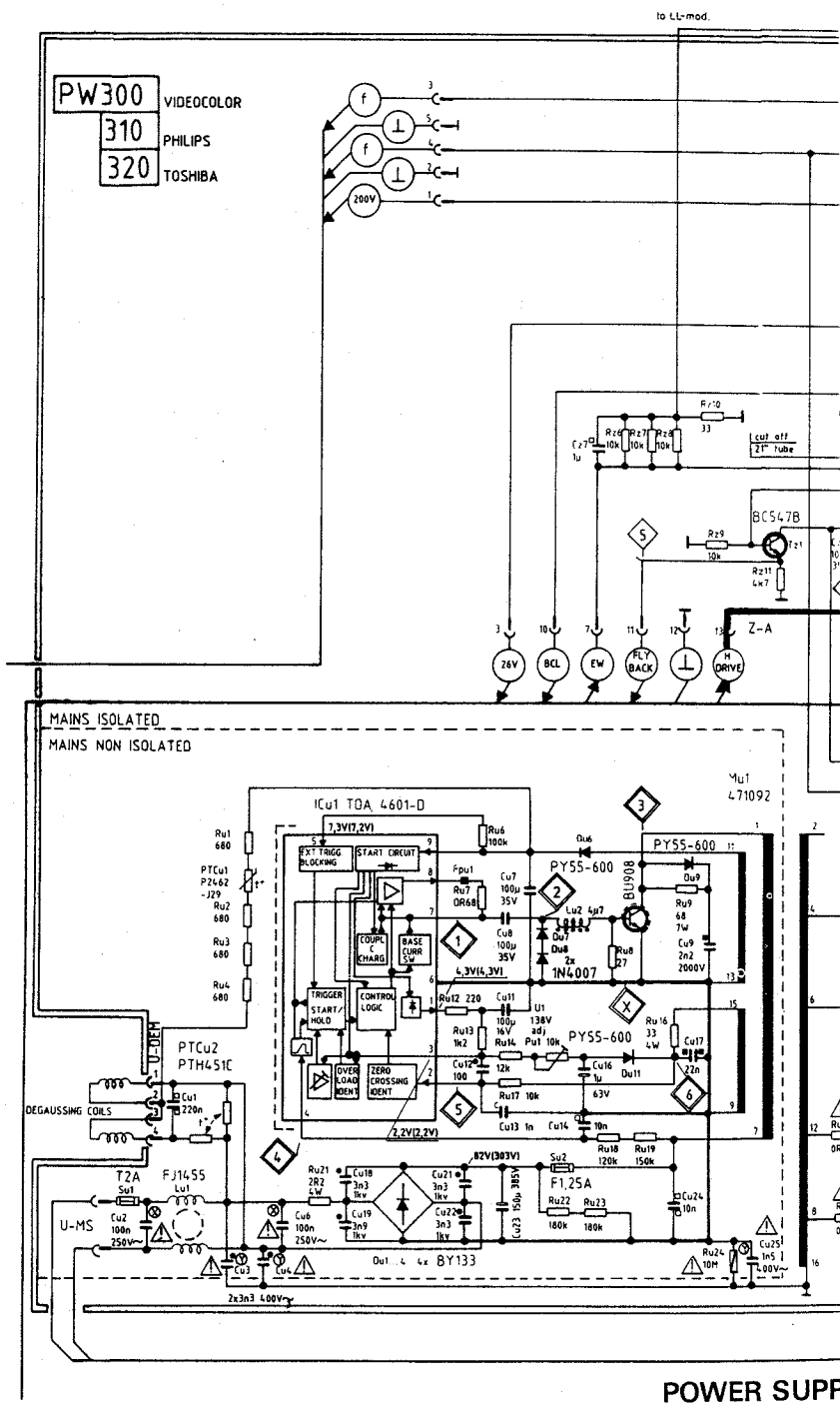
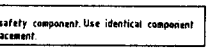
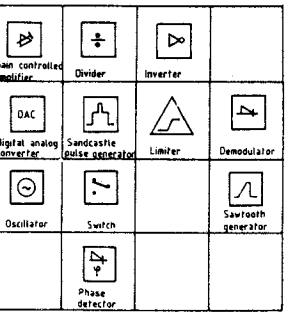




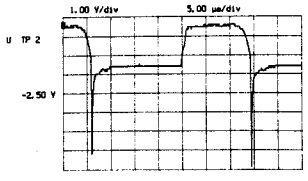
D8

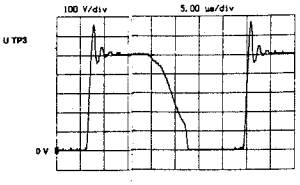
D6

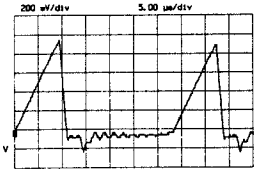


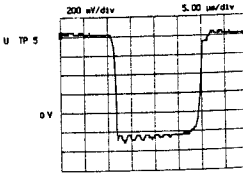


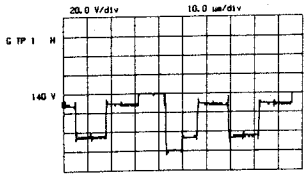
D6

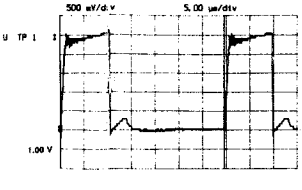


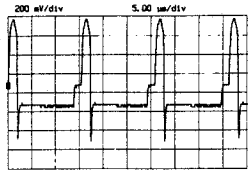


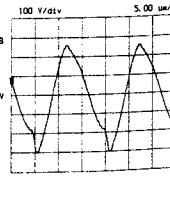












> 1mV RF 6,4V
<20uV RF 10,2V
VCR-sign. 2,1V
No sign. 0,2V

50 Hz-sign. 11,7V
60 Hz-sign. 7,6V
No sign. 0,1V

ICe7 TDA4566

ICh1 TDA2579A

ICh2 TDA 8432

1/3*ICe2

ICe4 TDA8461

BC547B

BD241A

BZX832 5V6

RF	3m4	3m0	3m2
••	Videocolor CTR	Toshiba	Philips/ITT
Rk9	68 1/2W	68 1/2W	100 1/2W
Rk13	220 1/4W	270 1/4W	560 1/4W
Rk11,12	68 1/2W	68 1/2W	100 1/2W
Rk21	4k7	5k1	4k7 1/4W
Rk24	2R7 1/4W	2R2 1/4W	2R2 1/4W
Rk26	2R7 1/4W	2R2 1/4W	1R8
Rk27	1k2	-	1k2
Rk28	1k2	2k2	1k2
VS 300	NO	YES	NO

E TP 47 H — 1 V/div — 10 µs/div — 4,0 V

C TP 31 H S-VHS — 200 mV/div — 10 µs/div — 5,2 V

H TP 53 H — 500 mV/div — 10 µs/div — 4,5 V

H TP 56 V — 1 V/div — 5 ms/div — 7,0 V

E TP 48 H — 1 V/div — 10 µs/div — 4,0 V

E TP 49 V
H TP 52 V — 500 mV/div — 200 µs/div — 2,0 V

H TP 54 H — 1V/div — 10 µs/div — 0 V

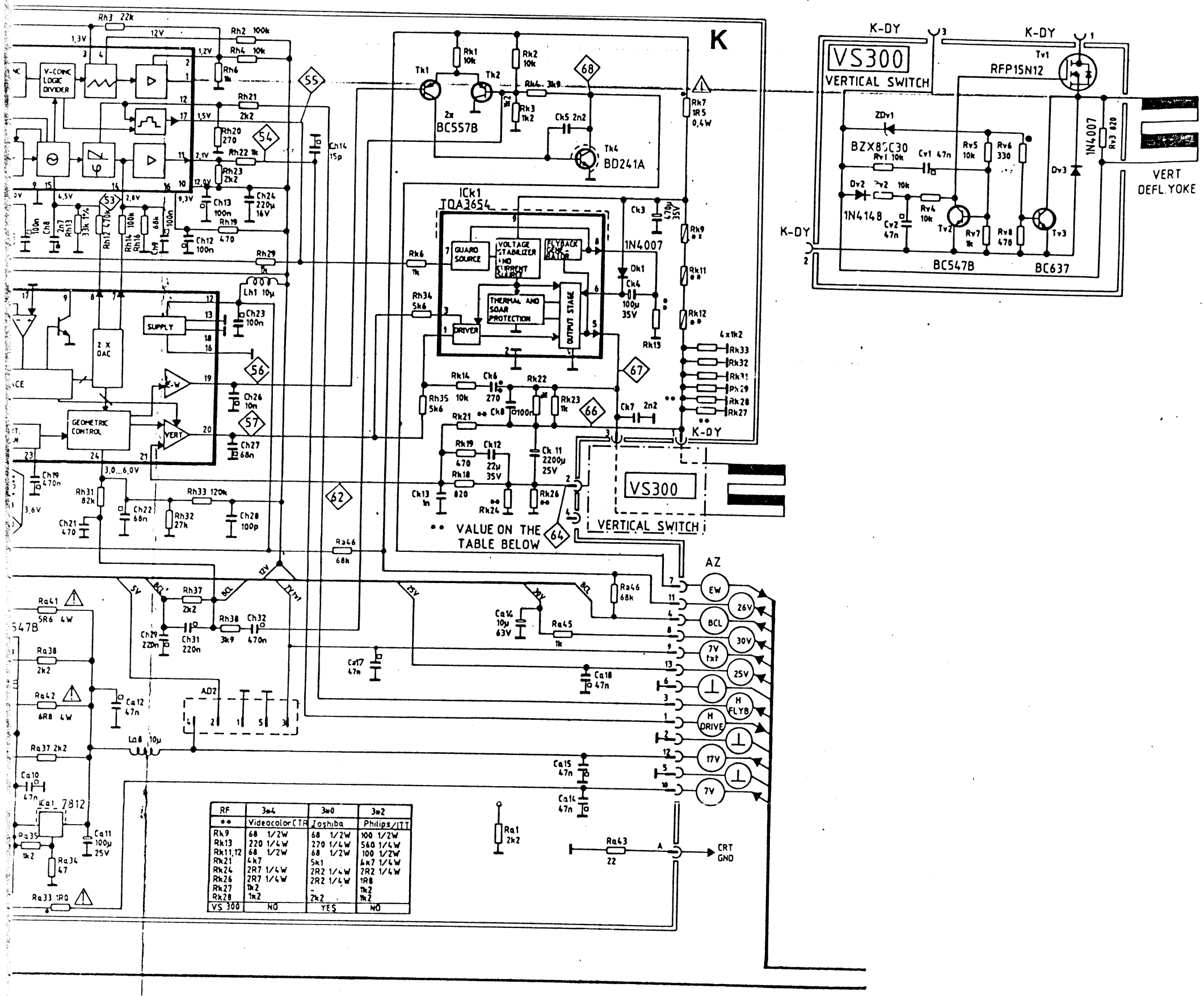
H TP 57 V — 500 mV/div — 5 ms/div — 0 V

C TP 29 H S-VHS — 200 mV/div — 10 µs/div — 2,6 V

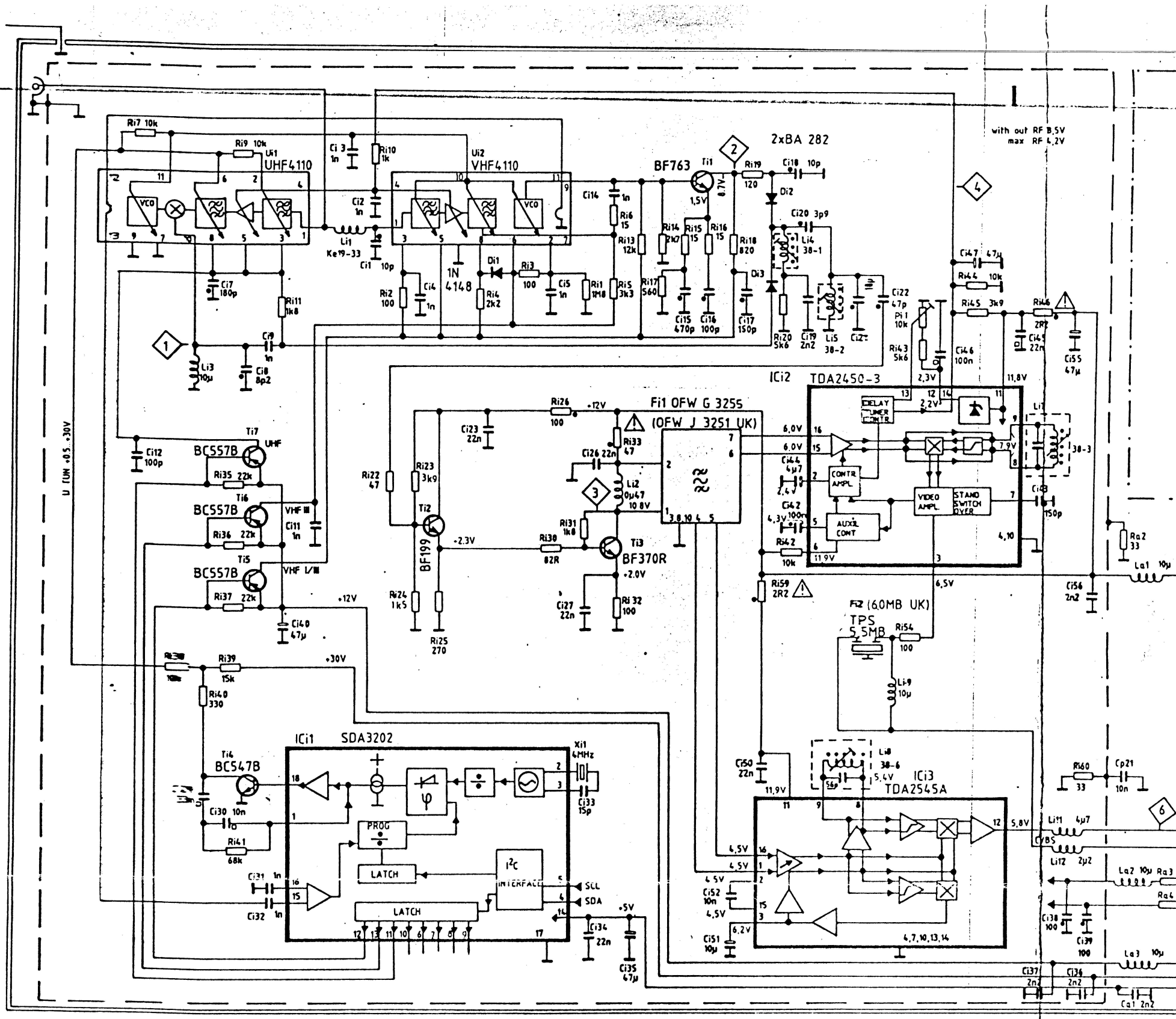
H TP 51 V — 1V/div — 5 ms/div — 0 V

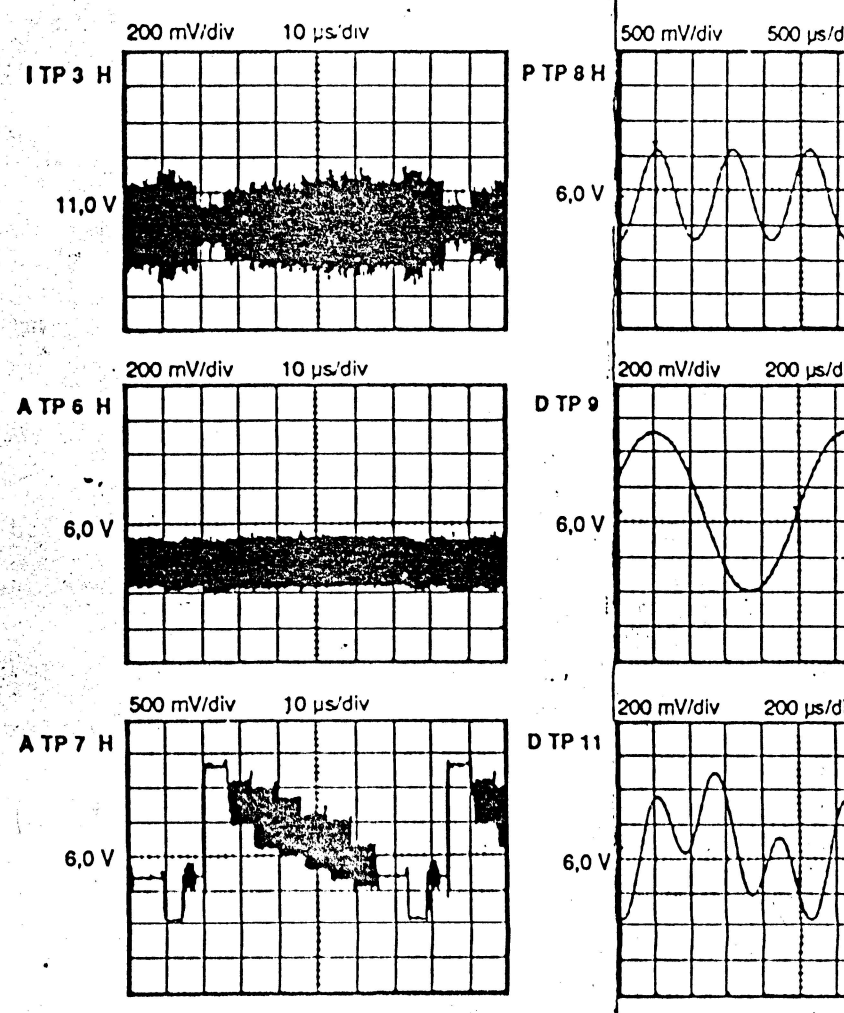
H TP 55 H — 2 V/div — 10 µs/div — 0 V

H TP 58 V — 2V/div — 5 ms/div — 0 V



RF	3m4	3m0	3m2
••	Videocolor CTR	Toshiba	Philips/ITT
Rk9	68 1/2W	68 1/2W	100 1/2W
Rk13	220 1/4W	270 1/4W	560 1/4W
Rk11,12	68 1/2W	68 1/2W	100 1/2W
Rk21	4k7	5k1	4k7 1/4W
Rk24	2R7 1/4W	2R2 1/4W	2R2 1/4W
Rk26	2R7 1/4W	2R2 1/4W	1R8
Rk27	1k2	-	1k2
Rk28	1k2	2k2	1k2
VS 300	NO	YES	NO


U TUN +0.5..30V
Ui1 UHF4110
Ui2 VHF4110
VCO
Ri7 10k
Ri9 10k
Ci 3 1n
Ri10 1k
Ci2 1n
Li1 Ke19-33
Ci1 10p
Ci7 180p
Ri11 1k8
Ci9 1n
Ci8 8p2
Li3 10µ
Ci14 1n
Ri6 15
Ri13 12k
Ri2 100
Ci4 1n
1N 4148
Di1
Ri4 2k2
Ri3 100
Ci5 1n
Ri1 1M8
Ri5 3k3
Ri14 2k7
Ri15 15
Ri16 15
Ri17 560
Ci15 470p
Ci16 100p
Ri18 820
Di3
Ci17 150p
BF763 Ti1
1,5V
8,7V
Ri19 120
Ci18 10p
Di2
2xBA 282
Ci20 3p9
Li4 38-1
Ri20 5k6
Ci19 2n2
Li5 38-2
Ci21
Ci22 47p
Pi1 10k
Ri43 5k6
Ci47 47µ
Ri44 10k
Ri45 3k9
Ri46 2R2
Ci46 100n
Ci45 22n
Ci55 47µ
with out RF 8,5V
max RF 4,2V
ICi2 TDA2450-3
2,3V
11,8V
2,2V
DELAY TIMER CONTR
CONTR AMPL
VIDEO AMPL
STAND SWITCH OVER
AUXIL CONT
Li7
38-3
Ci43 150p
4,10
6,0V
7,9V
4,3V
11,9V
Ri42 10k
Ri59 2R2
6,5V
Ci56 2n2
Ra2 33
La1 10µ
Fi1 OFW G 3255
(OFW J 3251 UK)
Ri26 100
+12V
Ci23 22n
Ri22 47
Ri23 3k9
Ci26 22n
Ri33 47
Li2 0µ47
10,8V
Ti2 BF199
+2.3V
Ri30 82R
Ti3 BF370R
+2.0V
Ri31 1k8
Ri24 1k5
Ri25 270
Ci27 22n
Ri 32 100
Ti7 BC557B UHF
Ti6 BC557B VHF III
Ti5 BC557B VHF I/III
Ri35 22k
Ri36 22k
Ri37 22k
Ci12 100p
Ci11 1n
Ci40 47µ
Ri38 10k
Ri39 15k
+30V
Ri40 330
Ti4 BC547B
Ri41 68k
Ci30 10n
ICi1 SDA3202
Xi1 4MHz
Ci33 15p
PROG
LATCH
I²C INTERFACE
SCL
SDA
+5V
Ci31 1n
Ci32 1n
Ci34 22n
Ci35 47µ
Ci50 22n
Li8 38-6
56p
5,4V
ICi3 TDA2545A
11,9V
5,8V
4,5V
6,2V
Ci52 10n
Ci51 10µ
4,7,10,13,14
Ri60 33
Cp21 10n
Li11 4µ7
CVBS
Li12 2µ2
La2 10µ
Ra3
Ra4
Ci38 100
Ci39 100
La3 10µ
Ci37 2n2
Ci36 2n2
Ca1 2n2
FI2 (6,0MB UK)
TPS 5,5MB
Ri54 100
Li9 10µ


I TP 3 H
200 mV/div
10 µs/div
11,0 V
P TP 8 H
500 mV/div
500 µs/d
6,0 V
A TP 6 H
200 mV/div
10 µs/div
6,0 V
D TP 9
200 mV/div
200 µs/d
6,0 V
A TP 7 H
500 mV/div
10 µs/div
6,0 V
D TP 11
200 mV/div
200 µs/d
6,0 V

DD341

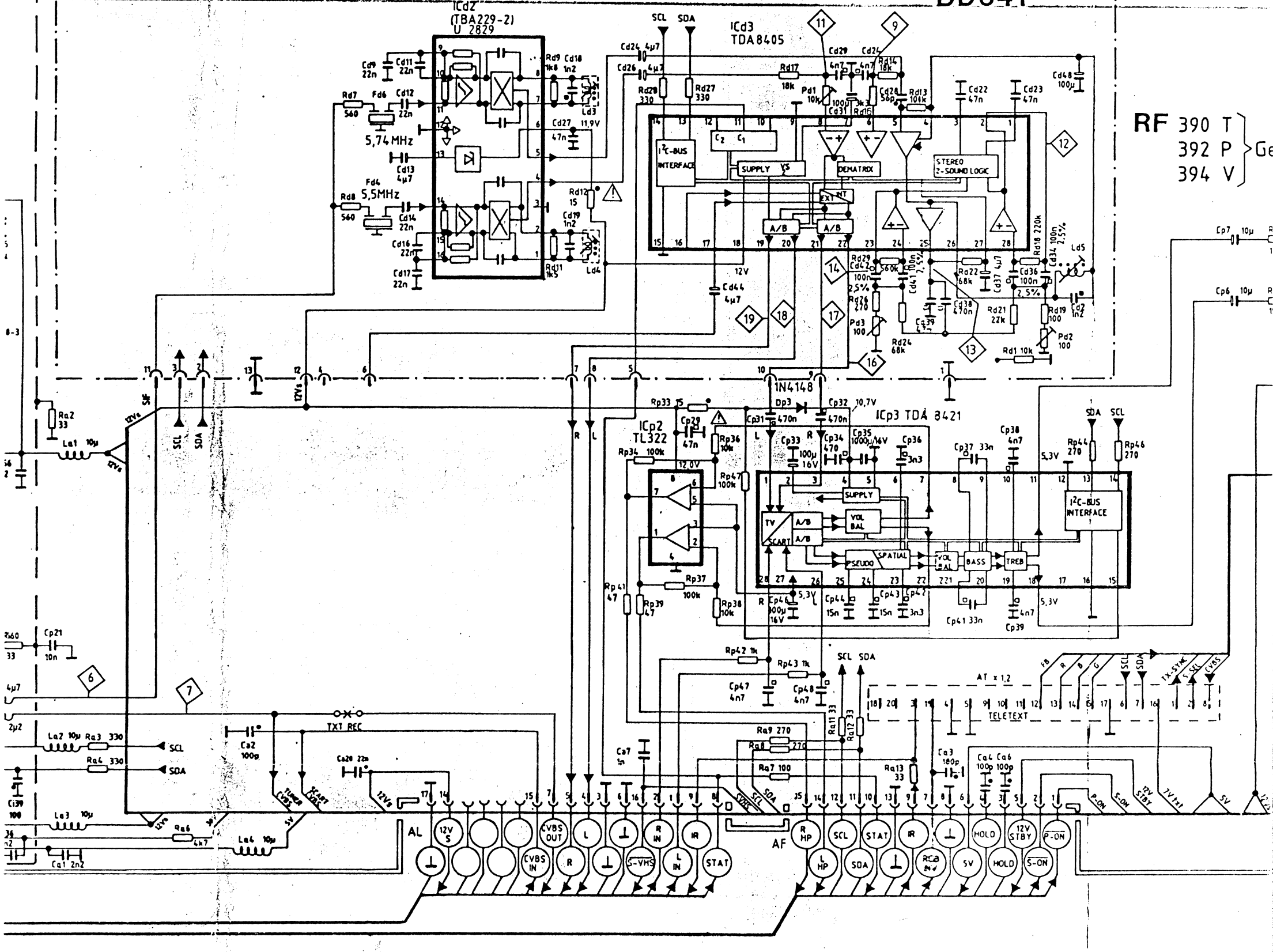
RF 390 T
392 P
394 V

ICdZ (TBA229-2) U 2829

ICd3 TDA 8405

ICp2 TL322

ICp3 TDA 8421



D TP 12 — 2 V/div — 1 ms/div — 0 V

D TP 16 — 500 mV/div — 200 µs/div — 6,0 V

D TP 17 — 6,0 V

E TP 24 H — 100 mV/div — 10 µs/div — 6,0 V

E TP 28 H — 200 mV/div — 10 µs/div — 8,0 V

D TP 13 — 500 mV/div — 2 ms/div — 8,0 V

E TP 22 H — 200 mV/div — 10 µs/div — 4,0 V

E TP 26 H — 200 mV/div — 10 µs/div — 5,4 V

E TP 32 H SECAM — 500 mV/div — 20 µs/div — 3,0 V

D TP 14 — 2V/div — 2 ms/div — 0 V

E TP 23 H — 200 mV/div — 10 µs/div — 4,0 V

E TP 27 H — 100 mV/div — 10 µs/div — 6,4 V

E TP 32 H PAL — 200 mV/div — 10 µs/div — 8,6 V

* (SECAM)

390 T
392 P } Germany
394 V

P

E

CC302

TDA 8451

TOKO37-15

ICc1 TDA8490

ICe3 TDA 8452

2/3* ICe2 4053

TDA4935 ICp4

LT360

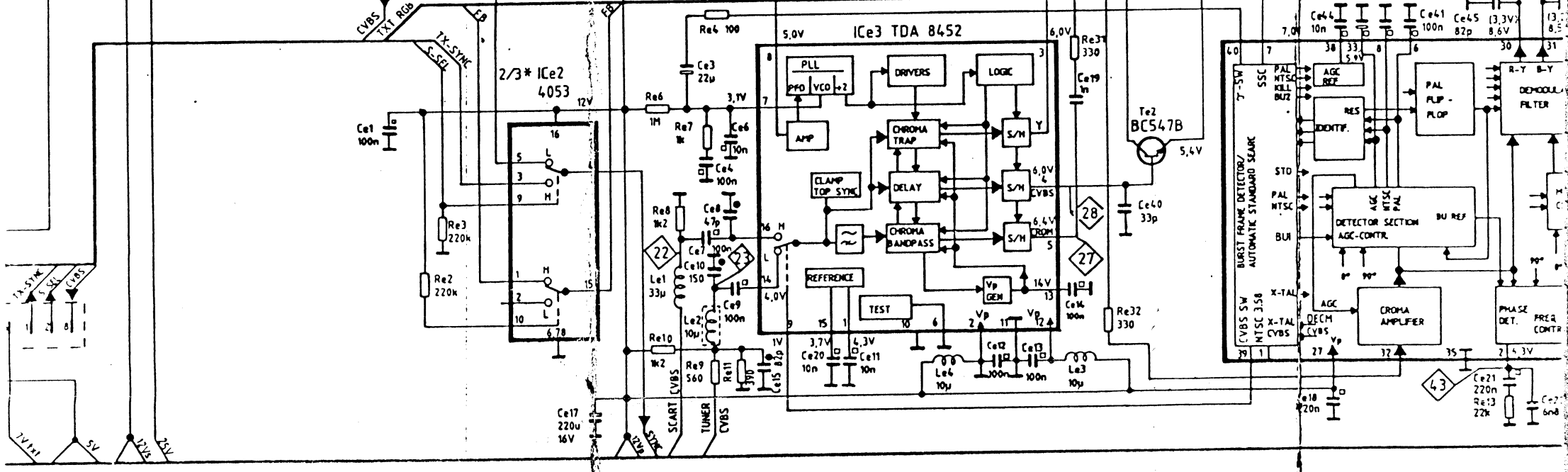
BD241A

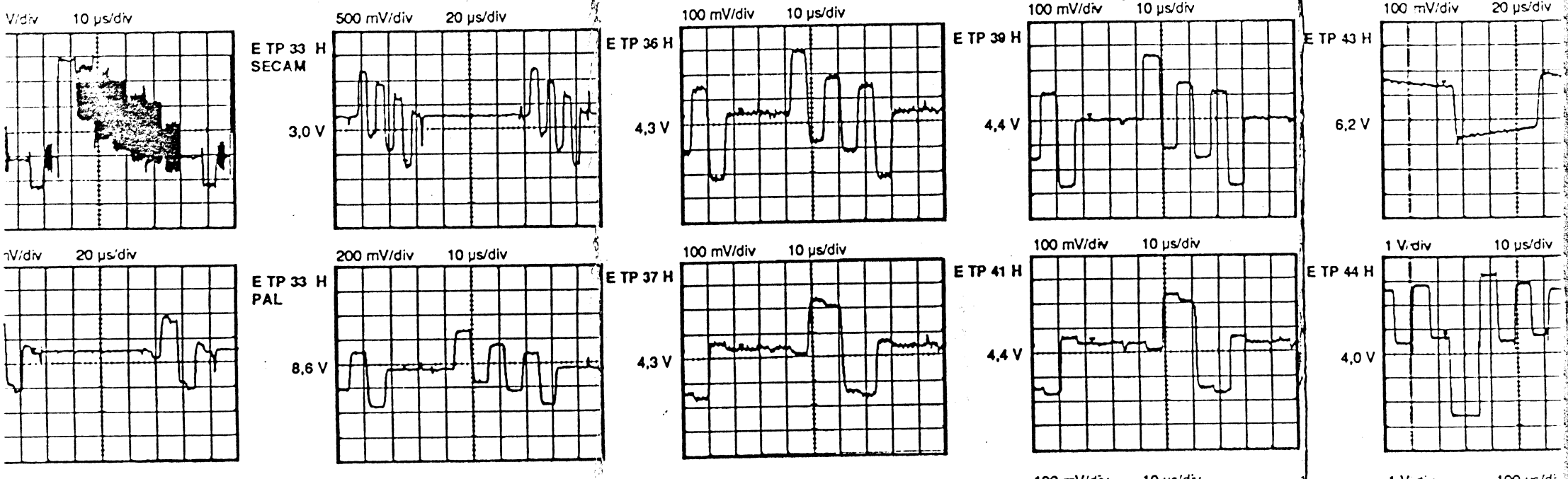
BC327-25

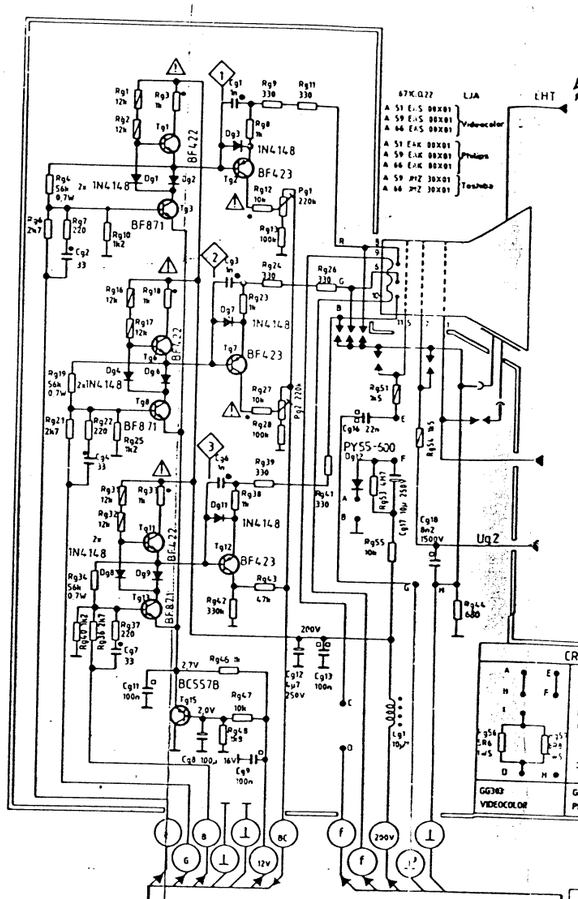
BC547B

BC547B

TDA 8451







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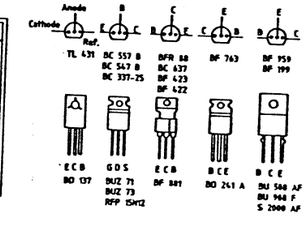
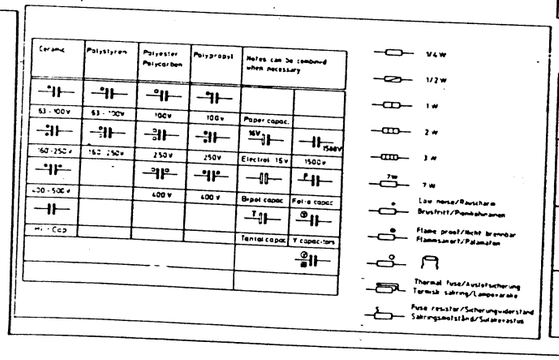
R/R-Y = RED OR R-Y COLOUR DIFFERENCE SIGNAL
FB = FAST BLANKING SIGNAL
R OUT = RIGHT AUDIO CHANNEL
L OUT = LEFT AUDIO CHANNEL
SCL = SERIAL CLOCK
SDA = SERIAL DATA
R IN = RIGHT AUDIO CHANNEL
L IN = LEFT AUDIO CHANNEL
CVBS IN = VIDEO SIGNAL
CVBS OUT = VIDEO SIGNAL
RC = REMOTE CONTROL
STA = STATUS FROM SCART 1
STA2 = STATUS FROM SCART 2

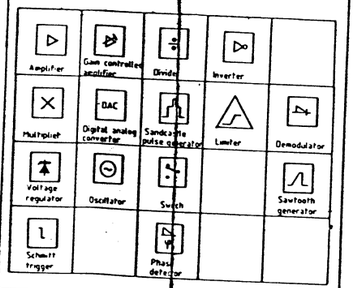
L HP = LEFT AUDIO CHANNEL FOR HEADPHONES
R HP = RIGHT AUDIO CHANNEL FOR HEADPHONES
SAT COPY = SATELLITE COPYING
MOD 1 = MODE INFORMATION 1
MODE 2 = MODE INFORMATION 2
RGB INV = RGB INVERTING
HOLD = PROCESSOR DISCONNECTING FROM I²C-BUS
P-ON = PICTURE ON DRIVING VOLTAGE 12 V
S-ON = SOUND ON DRIVING VOLTAGE 12 V
BC = BLACK CURRENT
EW = EAST-WEST RASTER CORRECTION
BCL = BEAM CURRENT LIMITING VOLTAGE
7V TXT = SUPPLY VOLTAGE FOR TELETEXT MODULE
H FLYB = LINE FLYBACK
H DRIVE = DRIVE PULSES FOR LINE OUTPUT STAGE
f = FILAMENT VOLTAGE FOR CRT

PW300 VIDEOCOLOR
310 PHILIPS
320 TOSHIBA

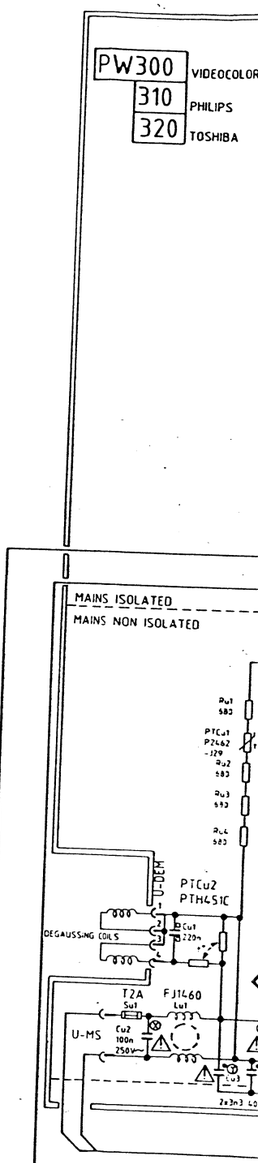
MAINS ISOLATED
MAINS NON ISOLATED

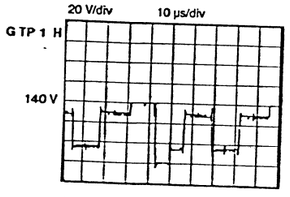


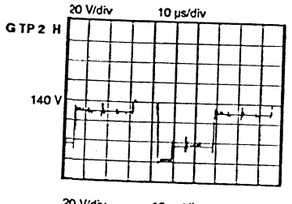


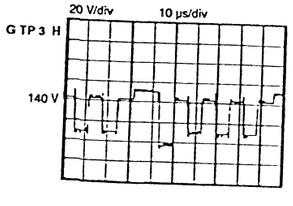


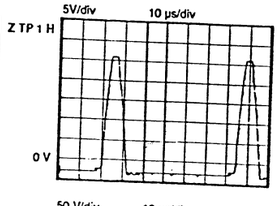
⚠ Critical safety component. Use identical component for replacement.

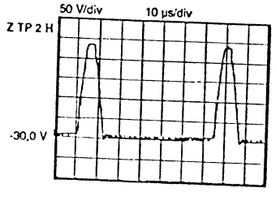


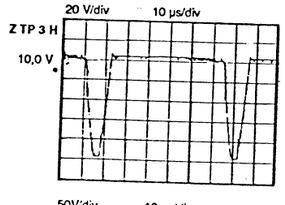


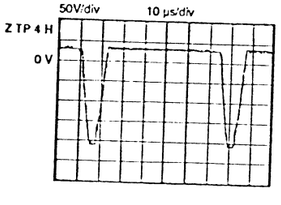


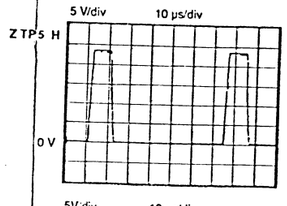


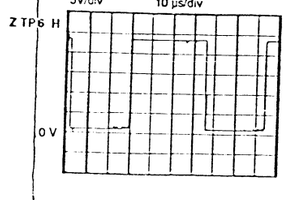


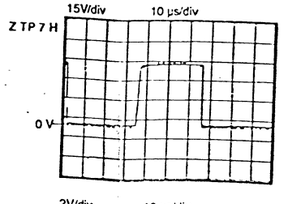


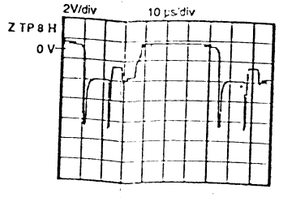


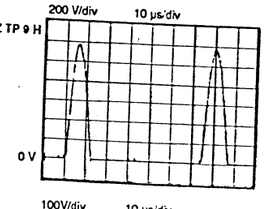


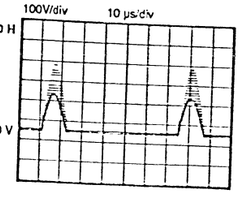


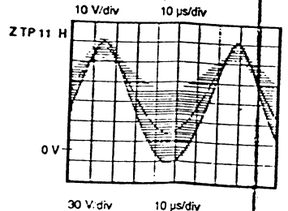


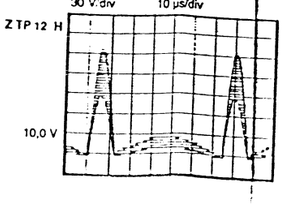


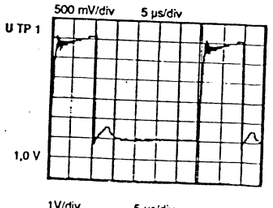


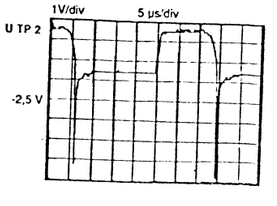


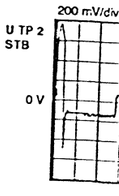


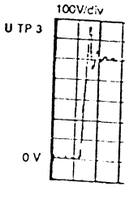












PW300 VIDEOCOLOR
310 PHILIPS
320 TOSHIBA

MAINS ISOLATED

MAINS NON ISOLATED

to LL-mod.

Z-G

Z-A

Z-DY

HOR DEFL. YOKE

FOCUS

EHT 25kV

PW320
• Mz3: FM1644
• Cz13: 8n7 1600V
FU1200

PW310
• Mz3: FM1645
• Cz13: 8n6 1630V
FU1201

PW300
• Mz3: FM1644
• Cz13: 8n7 1600V
FU1200

PY55-600

1N4007

BU508A

BC547B

BC637

BC548B

BY228

BY299

BZX83 B30

BY399

BY133

F1,25A

T2A

FJ1460

PTCu2 PTH451C

TDA 4601-D

Mu1 472926-00

Mz1 472914

Mz2 83610

YC300

FC302

NC303

COMMON

LEDy1 HD11056p

LEDy2 HD11056p

SP_SOUND
I_SOUND
II_SOUND

ICf1 SDA2526

ICf2 8052

JC IR_RECEIVER

RS-232

U TP 2 STB
200 mV/div 5 µs/div
0 V

U TP 3 STB
100 V/div 5 µs/div
300 V

U TP 4 STB
50 mV/div 5 µs/div
2,1 V

U TP 6
10 V/div 5 µs/div
0 V

F TP 2
2 V/div 50 µs/div
0 V

F TP 4
1 V/div 2 ms/div
0 V

L TP 5 H
500 mV/div 10 µs/div
2,5 V

U TP 3
100 V/div 5 µs/div
0 V

U TP 4
200 mV/div 5 µs/div
2,0 V

U TP 5
200 mV/div 5 µs/div
0 V

F TP 1
200 mV/div 5 ms/div
4,0 V

F TP 2
2V/div 20 ms/div
0 V

F TP 4
1 V/div 20 ms/div
0 V